

- 1070. Grewal, S.S. 1995.** Hoshiarpur torrents-their extent, causes, characteristics and control measures. In: *Torrent Menace: Challenges and Opportunities* (Eds.) G.Sastry, V.N.Sharda, G.P.Juyal and J.S.Samra, CSWCRTI, Dehradun: 46-57.

The paper broadly deals with the historical background, control measures of torrents (*choes*) in Hoshiarpur district (Punjab) in Shiwalik hill region. The process of denudation of the fragile Shiwalik hills started about 150 years ago and defied all possible solutions. The area affected by torrents in Hoshiarpur district of Punjab increased from 194 km² in 1852 to 2000 km² in 1939. Deforestation and land degradation in Shiwaliks was caused by heavy livestock and human population pressure and is vividly described in published literature by British workers (Holland, 1926; Glover, 1944; Gorrie, 1946). The earlier torrent control measures included legislative provisions for livestock eviction, control over grazing and illicit cutting of vegetation, changes in administrative set up to enhance the accountability of forest department, planting of suitable local trees, grasses and bushes for catchment treatment and stream bank protection, soil conservation measures including field bunding and safe disposal of excess rainwater from arable lands of the catchments and formation of cooperative "*Choe Reclamation Societies*". The treatment components in the recently formed Watershed Development Schemes are also presented.